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VOL. 7, No. 5

LIMA, OHIO

SEPTEMBER, 1914

THE LOCOMOTIVE WORLD

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H. C. HAMMACK, Editor

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LIMA, OHIO.

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NOTICE TO ADVERTISERS

Advertising rates furnished upon application. Change in advertisements intended for a particular issue should reach the office of the Locomotive World no later than the 20th of the month prior to the date of issue. New advertisements requiring no proof can be received up to the 1st of the month of date of issue.

THE FRANKLIN TYPE AND PRINTING COMPANY

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A History of the Word "Lumber"

The German Company, of Pittsburgh, Pa., have issued in pamphlet form a history of the word "lumber," and are now mailing them to the trade at large. The history had its origin in the fertile brain of Mr. C. W. Cantrell, of the company's Philadelphia branch, and is worth careful reading on the part of all who receive it.

A part of this little "history" may here be reproduced for the benefit of our readers and others who may happen to see it:

It has occurred to us that very few men engaged in the lumber business have seen fit to inquire into the origin of the word "lumber." It comes from the "Lombards," so called on account of their long beards. They were from Northern Germany and settled in Italy the latter part of the sixteenth century. They were the first pawn-brokers, and the room in which they kept their pledges was termed a "Lombard room," or a "lumber room."

The word lumber itself has an essentially American origin as applied to manufacturers of timber and was first used in Boston in an official way in 1663. It is a most comprehensive word and other countries have no expression for it that covers the ground so completely. In Great Britain, for instance, each item of lumber has its name, as with us, but, if they were speaking of manufacture of wood as a whole, about the only term which they have that covers the case is "wood goods," which is an awkward expression at best.

The word "lumber" was coined in Boston. A recent writer in the "Boston Journal" states that the word has not had full justice accorded to it. From 1630 for nearly 100 years Boston was the chief lumber market of the world, and that industry was one of the principal foundations of Boston's wealth. Other Boston staples were fish and leather, but in magnitude of transactions lumber was in the lead. The site of the old State House, known as market place, was formerly a lumber yard. The men of Boston got to calling sawn timber lumber, because the ships that brought that

article of commerce to Boston lumbered up the wharves and streets with their product.

In 1663 the police regulations of Boston provided that the wharves and all the streets "that butt upon the water" must be kept free from all "lumber and other goods." Boston lumber carried in Boston ships went to all parts of the world. It is said that the first cargo returned by the Pilgrim Fathers to England was a cargo of pipe staves, and for the reason that Europe could not produce as good an article, it was a profitable venture netting the shippers £500. In that industry the Puritans were satisfied that all Europe could not rival them.

The term lumber included masts, staves, clapboards, shingles, boards, planks and timbers. Although Boston is still a large lumber market, and has continued so through all these years, it did not maintain its supremacy in this country, being early overshadowed by other markets.—St. Louis Lumberman.

Some Don'ts for the Clerks

Don't throw the pins away when you clear up your desk. Chances are they still have the sharp point and can be used again.

Don't throw the letterhead and blind copies in the waste basket because you made an error in date or salutation. Tear the good bottom portion off; it makes admirable paper to "figger" on.

Don't sharpen the next pencil as you would whittle a stick. There is a difference between the two. Watch the man who makes the pretty point on the pencil.

Don't use a large envelope for mailing the next man's mail to him, when small or medium size would suffice. A suit of clothes costs more than a pair of trousers.

Don't ever use more than one envelope for one time of mailing to one party. It takes you just as long to address the extra envelope or envelopes as it would to get all mail together. Think of the mail clerk, the train baggageman and the man who opens two or more envelopes when one would have sufficed.

Don't throw the rubber bands on the floor. Bands cost one railroad in this country fifty thousand dollars a year. If you doubt the high cost of rubber bands buy one box.

Don't throw the pencil away because it is half use up. A pencil lengthener can be used and permits usage to the last inch.

Don't throw carbon paper away until it has "served full time." Don't leave carbon paper on top of your typewriter to be blown to the floor by the janitor's broom.

Don't use the printed letterheads or printed forms for scratch paper. Scratch paper is far cheaper; it requires a printer to feed to the printing press.

Don't throw away the top sheet of the writing paper pad. Oftentimes it is not the least bit soiled.

Don't fail to count your needs before printing mimeograph circular letters. It is wasted energy and waste of paper to print more copies than you really need.

Don't throw away your old file records without recovering the file; it can oftentimes be used again.

Don't fail to turn off the electric fan when you leave at night. The motor wears out the same as you do.

Don't fail to turn out the lights, where proper to do so, before going home at night.—R. L. White, in *Railway Age-Gazette*.

Brazilian Railway Development

A recent statement by Senor Hermes da Fonseca, the president of Brazil, says that the railway system of Brazil was increased in 1913 by 1,431 miles, bringing the total up to 15,280 miles. Of this total 2,188 miles are operated by the federal government, 5,728 miles are leased by it to individuals, 3,454 miles have been "conceded" by the federal government to private enterprise and there are 3,903 miles which have been conceded by the different states.

On the 21 Mikado type locomotives recently ordered from the Lima Locomotive Corporation by the Southern Pacific, vanadium steel has been specified for the frames, driving axles, main and side rods, piston rods, and main crank pins. All the forgings will be heat treated to give physical properties in conformity with the specifications recommended at the recent convention of the Master Mechanics' Association, by the committee on the Use of Special Alloy and Heat-Treated Steels in Locomotive Construction. The driving axles will be hollow bored.—*Railway Age-Gazette*.

An Enterprising Yellow Pine Industry

Homochitto Lumber Co.

Bude, Mississippi

One of the most progressive Yellow Pine Lumber enterprises in Mississippi established in the past two years is that of the Homochitto Lumber Company, located at Bude, Mississippi. This company was organized in 1912. They purchased 100,000 acres of timber land in Franklin



One of the two 70 ton Shay Locomotives used by the Homochitto Lumber Co.

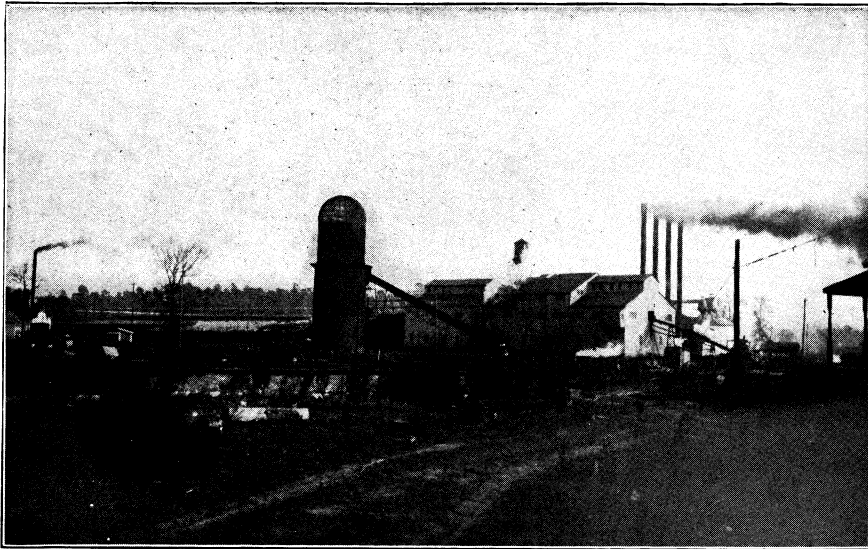
County, Mississippi, which land is adjacent to the Mississippi Central Railroad. They selected their mill site almost in the center of their immense yellow pine holdings, and immediately after organization of their Company they laid out a town at the site selected and named it "Bude." Bude is located on the Mississippi Central Railroad twenty-nine miles from Brookhaven, Miss., where the Mississippi Central crosses the Illinois Central Railroad. Bude is forty miles from Natchez, Mississippi.

The officers of the Homochitto Lumber Company are, Mr. F. L. Peck, president; Mr. C. D. Jones, vice-president; Mr. G. J. Royce, secretary; Mr. J. T. Porter, treasurer; Mr. E. S. Peck, assistant secretary and treasurer; Mr. S. E. Moreton, general manager.

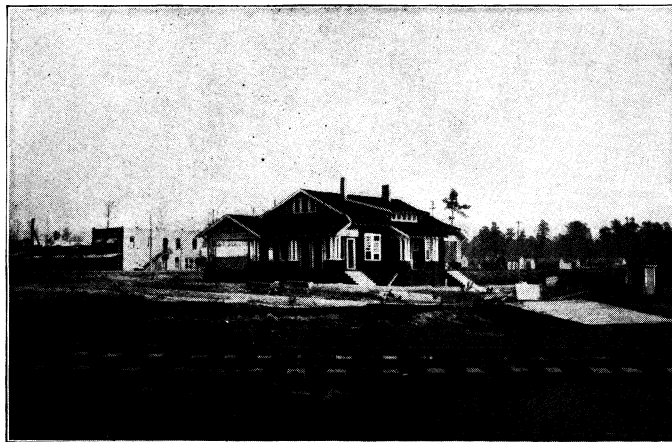
The town of Bude was named after Mrs. F. L. Peck's home in England.

In July, 1913, this company started erection of their plant, which was completed and started operation January 30, 1914. The plant is strictly modern throughout. The sawmill is of concrete and steel construction, 64 feet wide and 212 feet long. The building was designed and erected by the Wisconsin Bridge and Iron Company of Milwaukee, Wisconsin, under the direction of the Filer & Stowell Company, also of Milwaukee. The plans and all the sawmill machinery was furnished by the Filer & Stowell Company. The machinery in the mill consists of two

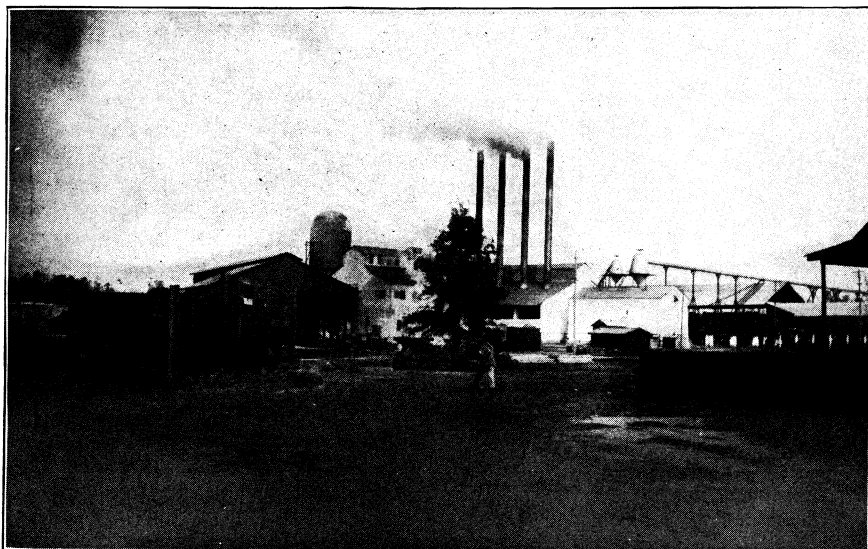
Front View
Sawmill
and Planer



Office
Homochitto Lumber Co.



Mill and
Locomotive
Shed



band saws and one gang saw, and has a daily capacity of 160,000 feet of lumber. The steam dry kilns, six in number, are constructed of concrete. The equipment was furnished by the National Dry Kiln Company of Indianapolis, Indiana. The kilns are double track and have a drying capacity of 125,000 feet per day.

The planing mill is of wood construction and the machinery consists of S. W. Woods Machinery Company fast feed machines, five planers, one molder, one edger, one resaw, seven trim saws, one rip saw and one surfacer. The planing mill has a maximum capacity of 200,000 feet finished lumber per day.

The boiler, fuel houses and power house are all built of concrete and steel. A modern steel refuse burner is utilized to consume the waste. Their logging railroad at the present time consists of twelve miles of main line railroad and six miles of spur track, all 56 1-2 in. gauge and built of 50 lb. steel. Their locomotive equipment has been furnished exclusively by the Lima Locomotive Corporation and consists of two 12x15 three truck 70-ton Shays, one 12x14 1-2 three



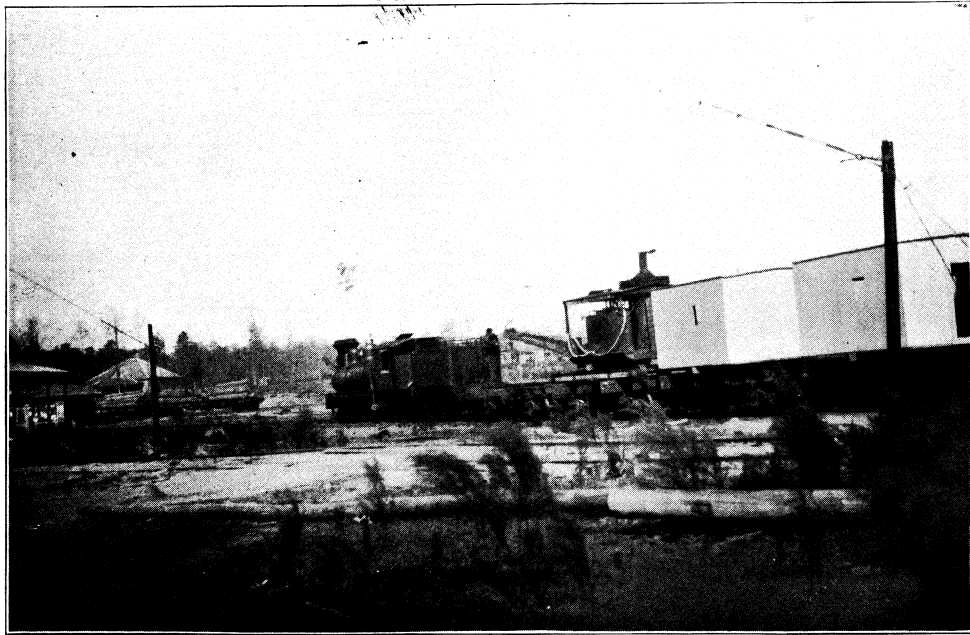
View of Town of Bude, Office and Log Pond Homochitto Lumber Co. in foreground

truck 65-ton Shay and one 12x12 three truck 65-ton Shay locomotive. They use for hauling their logs, sixty 60,000 capacity skeleton log cars and haul three train loads per day, each train consisting of twenty cars. They also have ten flat cars and four box cars. Their loading is done with three American loaders of the most modern type. The timber lands are extremely rugged, and in some cases it is necessary to have seven per cent grades on the spur tracks. The logs are handled very easily over their spur tracks with the Shay geared locomotives.

For skidding they use forty head of mules, and let out the balance by contract. The main logging camp is located ten miles from the mill; the houses of which are made portable. The portable log camp houses are shown in illustrations herein. This company has about twenty years run at this location and their timber consists mostly of long and short leaf yellow pine. There is some hardwood mixed in with the yellow pine which is cut and supplied to a hardwood mill built by T. J. Spraggins at Bude.

The town of Bude now has a population of 1200 people, has 12 modern commercial stores and 200 modern cottages and residences, all equipped with water and light. There is a commodious school building, electric light plant and complete water system. From the illustration showing the company's office and town, some idea can be had of the layout of the town.

Mr. S. E. Moreton, general manager of the company, kindly furnished us the description of the plant as well as the photographs from which the illustrations were made, for which favor we feel indebted. Mr. Moreton is a lumberman of wide experience and is not only interested in the Homochitto Lumber Company, but also has an interest in the Central Lumber Company at Brookhaven, Mississippi.



View showing 70 Ton Shay pulling Log Loader and Logging Camp Houses
Homochitto Lumber Co.

Car Shortage Threatens

Shippers Urged to Get Cars Out of Their Hands in a Hurry

A warning against car shortage, resulting from congested conditions brought about by the European war, has been sounded by the Railroad Commission of Texas, and the advice that the Texas commissioners send out might well be considered as timely in Louisiana and other states as well as Texas.

It is urged by the Texas commission that the best and safest way to minimize the congestion is for every man to pass every car out of his hands in the least possible time and to move it as though in a hurry.

The possibility of car shortage has been considered in shipping and railroad circles of this city for some time, and local railroad officials have requested that shippers load and unload cars with-

out delay, and not ask for cars unless they are certain of loading them.

The Standard Gauge

The ancient Romans now stand accused of fixing the standard gauge of 4 feet 8 1-2 inches that is inviolable in railroad construction. A recent authority asserts that while George Stephenson was inspecting portions of the old Roman wall upon which chariots were driven he took occasion to measure the width between the ruts worn in the stone. As he found this to be 4 feet 8 1-2 inches across he decided that the Romans must have learned from experience that this gauge was the most practical, and he, therefore, adopted that width. Since then many other gauges have been tried, but none have proved more satisfactory.

Locomotive Staybolts

The cost of repairing a broken staybolt, even if the work can be combined with other necessary work, is not simply that of the labor and material employed, but also some portion of the value of the service of the engine which is lost thereby, and if the actual costs of staybolt maintenance and other matters incident thereto were closely computed, very good reasons for means of improvement would be manifest. Not that improvements have not been made, but the iron makers have been diligent in producing special staybolt irons that have more lasting qualities to stand the peculiar requirements of that service. By the use of special mixtures and methods of piling and working, special brands of iron are produced which give very excellent results, but the breakage of solid staybolts has not been entirely stopped by such means.

With a well-designed and well-built boiler equipped with solid staybolts, there should not be serious staybolt trouble until about the third year of its use. In other words, the solid staybolt in modern, well-designed boilers, is from 50 per cent to 75 per cent perfect, based on 100 per cent being the life of the average firebox, which is now about 5 years.

Experiments have been made showing the relative expansions of the firebox and the outer boiler sheets when under pressure, proving they are not alike, and therefore the staybolts, in addition to the tensile load imposed by the pressure, have also an angular strain due to these irregularities. It is these angular movements many times repeated, that account for broken staybolts, for the direct pull is taken care of by a relatively high factor of safety. In proof of the latter statement assume staybolts with 7-8 in. diameter at smallest portion, spaced 4 in. by 4 in. in a boiler carrying 200 lbs. steam pressure. Each bolt support 16 sq. in. and a consequent load of 3,200 lb. The bolt area is .60132 sq. in. and the above load is therefore 5,320 lb. per sq. in. As staybolt iron has generally not less than 48,000 lb. ultimate tensile strength the factor of safety exceeds nine. This proves the undesirability of large staybolts, as with large sizes there is an increase of rigidity, whereas the desirable feature is flexibility.

It seems clear that they do not break on account

of lack of strength of the cross section, but on account of the oversteering of the outer fiber due to angular vibration, and it might be well to theorize as to when the initial check or break in the outer fiber occurs. Reference has been made to tests showing angular movements of sheets and staybolts under pressure, but it is likely that these do not produce the extreme movement which may account for the initial check or failure of the outer fiber, which progresses gradually inward and results finally in complete fracture. Reference has been made to the irregular temperatures of the sheets, produced by rapid and uneven heating of the firebox in firing up, also in cooling down and washing. It is believed that at these times the angularity is greatest and is accountable for the initial checks, although at these times there is no pull on the bolts. After water circulation is well started, undoubtedly the amount of angular movement is greatly reduced, although remaining in some degree, but the damage has been done, the check started and in course of time evidenced by the complete fracture.

Now, what is the remedy? More flexibility of the body of the bolt between the sheets to reduce the stress on the outer fiber so that the initial check will not occur, and also reduce their strength as levers to punish the firebox material, reduce the buckling and save the fireboxes. It is manifestly impossible to correct the handling of engines at terminals so that these irregular temperatures and stresses will be done away with. Availability of power is the first consideration and terminal forces are under extreme pressure to get engines turned in the shortest possible time, and engines which they are not in a hurry for get the same treatment generally in respect to the matters which contribute to staybolt breakage and firebox cracking.

Recognizing the necessity of meeting the situation and demands for availability of power, many railroads have installed improvements in washing out which contribute materially to that phase of the question. Bright minds have also been at work on the staybolt structure and some very meritorious designs have been produced, but generally at considerable increase over the solid bolt, both as to first cost and application cost. The importance of the necessity for extension of staybolt life and increase of locomotive availability, will,

however, justify increased cost, the degree of which being dependent upon conditions. Owing to staybolt breakage occurring generally close to the outside sheet, the earlier attempts to secure flexibility of the staybolt structure in this country were to change the outer end to a ball and socket form, which gave complete and absolute flexibility at that end. This idea originated on the Pennsylvania Railroad, and is in extensive use there and elsewhere at the present time and has served as the basis of subsequent modifications and improvement of the various staybolts of that type and which are generally and commercially known as flexible staybolts.

One of the more recent developments in the art aims directly to increase the flexibility of the body of the staybolt to eliminate breakage and also save the firebox sheets by the simple expedient of making staybolts with a body of two pieces of half-round iron, thus having two neutral axes, each much closer to the outer fibre than in the solid section, and then by twisting the body present the plane of greatest flexibility in every direction in which a lateral stress may come to it. The ends of these bolts are larger than the body and take the usual staybolt thread, and are applied to the boiler in the same manner, and at same cost as that of solid bolts. As they have a relative flexibility of body several times that of solid bolts of equivalent cross section, it is reasonable to believe that the outer fiber stresses have now been reduced so as to give such bolts a life of three, four, or half a dozen times that of solid bolts, and it can be reasonably expected that these bolts will last the life or more of the average firebox, and more than that is unnecessary, an economic feature of importance.

As a general proposition, it pays to use the best, and this applies particularly in locomotive maintenance and availability. Analysis shows that it costs about two dollars to apply each dollar's worth of material purchased for a railroad shop, but this is probably too low in considering the relative cost of material for staybolts and their application, particularly in breakage renewals. The costs for cooling down, emptying, stripping, removal and replacement of the broken bolts, and the other parts involved, together with the loss of time of the engine, makes the material costs insignificant by comparison. If the causes which contribute to staybolt breakage, are also responsible for the early failure of fireboxes a railroad could almost afford to use gold staybolts, taking all the factors into consideration.—Railway Age Gazette.

Freight Traffic Is Fair

Some Decreases Are Reported as a Result of the Grain Embargo

Improvement Is Expected

As a result of the placing of an embargo on shipments of grain to gulf ports, railroad traffic conditions are not so satisfactory as they were a few weeks ago. Taken as a whole, however, the aggregate movement of freight is about the same as last year, some of the carriers reporting small gains, while in still other cases there is a small reduction as compared with a year ago. As a consequence of the embargo there has been a general reduction on the southern and southwestern lines. The situation at the gulf ports is clearing up, however, as many boats have taken out large cargoes and others are expected to take good loads of wheat to England and France. Wheat which was in transit at the time of the placing of the embargo is being taken from connecting lines, although new shipments are being refused until such time as they can be handled promptly. Railroad men anticipate that the embargo will be lifted in a few days and believe that if there is no further delay in connection with the financing or securing of war insurance risks the greater part of the recent accumulations of products awaiting export will be disposed of.

A number of copper mines in the southwest have been compelled to shut down as a result of the hostilities in Europe, while others in the Lake Superior region have been affected similarly. This, of course, has resulted in the curtailment of minerals from the mines and of supplies to them. This is an important factor, especially when it is considered that the loadings mean a loss of several hundred carloads a day. In the west and northwest there are no disturbing factors thus far. The movement of new grains is starting, and while farmers there are disposed to hold or store their wheat, believing that higher prices will prevail later on as a result of the war, there is to be a fair run to terminal markets. Thrashings there have been disappointing in some sections, but they have about as much wheat as last year.

Railroad men are not entirely agreed as to the ultimate effect of the European war on their business. Those who are of an optimistic turn of mind are inclined to believe that the buying of goods will be greatly improved and that shipments to the seaboard for export will increase. Others believe that the war will result in a slowing down of trade and are of the opinion that even if there should be an expansion it will not be of a permanent character.

Far western sugar refiners won a victory over

their competitors in New Orleans and New York today when the Interstate Commerce Commission approved the establishment of new rates on sugar from California producing points to Chicago and the territory east of the Missouri river, which, it is believed, will open these markets to the western product.

It was shown by western refiners and carriers that seven western states produced last year beet sugar and refined Hawaiian cane sugar totaling 853,000 tons, or enough to supply 20,000,000 persons, while the population of those states is but 6,825,821.

The new rate is fixed at 25 cents per hundred pounds higher than the New Orleans rate to Chicago territory, and 23 cents higher than the New Orleans rate to points east of the Missouri river. One effect, according to the refiners' application, will be to divert to San Francisco refineries much of the Hawaiian sugar now carried to New York by way of the Tehuantepec Railroad.

The commission issued also a group of orders designed to correct intermediate rates in territory west of the Missouri river in conformity with the new through rate.

Lumbermen Willing to Co-Operate

The Lumbermen's Association, of Chicago, has sent out to its members a circular expressing a commendable spirit of co-operation. It reads as follows: "An opportunity is now presented for every member of the Lumbermen's Association of Chicago to help the railroads increase their earnings, irrespective of the rate advance decision. This may be done with little or no expense to you, but with tremendous appreciation on the part of our railroad friends. We refer to heavier loading of cars. With the beginning of the grain movement there is going to be an increasing difficulty on the part of the carriers to furnish box cars for all concerned, the equipment this year being in worse condition than usual. The railroads are making an extra special effort to have cars loaded to absolute full capacity. What it means to the railroads in actual earnings may be seen from the following example: If you ship three carloads of lumber, each weighing 60,000 pounds, moving on a 20-cent rate, to Chicago, in place of shipping four cars of 45,000 pounds on the same rate, you will not only save one additional car to be loaded for the above orders, but the elimination of the one car will save for the railroads the entire cost of hauling the average freight train 65 miles. That means money in the pockets of the railroads, and whatever may be your opinion of the rate advance question, you certainly appreciate that the one saving to them, by our co-operation, will be of tremendous help at this most critical time."

—Railway Review.

Cash Investment of the Railways During Six Years

During the six fiscal years, 1908 to 1913, inclusive, the steam railways of the United States of Class I invested in their road and equipment cash to the amount of \$4,010,385,303. Railways of Class I, so designated by the Interstate Commerce Commission, are those with annual operating revenues of over \$1,000,000. They include about 90 per cent of the mileage, receive more than 96 per cent of the revenues, and handle more than 98 per cent of the traffic.

This cash investment of the operating railways of Class 1 of the eastern district during the six years was greater than the amount of capital securities issued by them during this period, and was 19.9 per cent of the aggregate of their capital securities outstanding June 30, 1913; of the railways of the same class of the southern district it was 21.1 per cent, and the railways of the same class of the western district it was 23.2 per cent of the aggregate of their capital securities outstanding June 30, 1913. That is, the cash actually expended by these railways during the last six years upon their properties used in transportation amounts to more than one-fifth of their total capitalization at the close of the last fiscal year. This is at the rate of \$668,397,551 per year.

These figures are obtained through a compilation made by the Bureau of Railway Economics from the reports of the railways to the Interstate Commerce Commission.—Railway Master Mechanic.

New Rates Ordered on Tap Line Roads

The Interstate Commerce Commission at Washington yesterday made public its decision in the so-called tap line cases, pending for three years, and reversed its former ruling denying the short line lumber railroads the right to participate in divisions of rates with connecting trunk lines.

Through routes and joint rates are restored as of May 1, 1912, when they were vacated by the commission's order.

A number of Arkansas and Mississippi railroads feeding trunk lines running into Memphis by the division of the trunk line rates, thereby proving the commission's decision of far reaching importance in this section.

The ruling follows a recent decision of the United States supreme court fixing the status of the so-called tap line railroads.

(Continued on Page 10)

Interesting Figures Relating to Canadian Railroads

	Cars Owned and Leased		Railroad Operated	Total Train Mileage	Passengers Carried	Tons Moved (2,000 lbs.)	Gross Earnings	Net Earnings
	Passenger Cars	Freight Cars						
	No.	No.						
1891	2,175	52,538	14,009	43,399,178	13,222,568	21,753,021	48,192,099	13,231,650
1892	2,289	54,652	14,589	44,448,468	13,533,414	22,189,923	51,685,768	15,197,539
1893	2,413	54,915	15,020	44,385,953	13,618,027	22,003,599	52,042,396	15,426,364
1894	2,497	55,455	15,627	43,770,029	14,462,498	20,721,116	49,552,528	14,334,095
1895	2,513	56,973	15,976	40,661,890	13,987,580	21,524,421	46,785,487	14,035,818
1896	2,546	57,196	16,270	44,500,602	14,810,407	24,266,825	50,545,569	15,502,914
1897	2,683	57,754	16,550	45,780,851	16,071,338	25,300,331	52,553,276	17,184,611
1898	2,584	62,505	16,717	50,668,283	18,444,049	28,785,893	59,715,106	20,577,556
1899	2,815	65,566	17,250	52,215,207	19,133,365	31,211,753	62,243,785	21,537,567
1900	2,828	67,518	17,656	55,177,871	21,500,175	35,946,183	70,740,273	23,040,476
1901	2,881	72,752	18,139	53,349,394	18,385,722	36,999,371	72,898,749	22,530,022
1902	2,604	68,875	18,713	55,729,856	20,679,974	42,376,527	83,666,503	26,322,911
1903	2,771	75,771	18,987	60,382,920	22,148,982	47,373,417	96,064,526	28,583,003
1904	3,016	93,298	19,885	61,312,002	23,640,765	48,097,519	100,219,437	28,293,640
1905	3,130	90,506	20,487	65,934,114	25,288,723	50,893,957	106,467,199	26,489,625
1906	3,319	91,826	21,353	72,723,482	27,989,782	57,966,713	125,322,865	38,193,431
1907	3,642	107,407	22,452	75,115,765	32,137,319	63,866,135	146,738,214	42,989,542
1908	4,026	115,709	22,966	78,637,526	34,044,992	63,071,167	146,918,314	39,614,171
1909	4,192	117,779	24,104	79,662,216	32,693,309	66,842,258	145,056,336	40,456,252
1910	4,320	119,713	24,730	85,409,241	35,894,575	74,482,866	173,956,217	53,550,777
1911	4,513	127,158	25,399	89,716,533	37,097,718	79,884,282	188,733,494	57,698,709
1912	4,946	140,918	26,727	100,930,271	41,124,181	89,444,331	219,403,753	68,677,213
1913	5,696	182,221	29,303	113,437,208	46,230,765	106,992,710	256,702,703	74,691,013

—Employers Magazine—Canadian Car & Foundry Co.

New Rates Ordered On Tap Line Roads

(Continued from Page 9)

will profit greatly by the commission's decision, but the long fight was carried on to a final victory through the efforts of the Crittenden Railroad Company, the Helena, Parkin & Northern Railroad Company and the Manilla & Southern Railway Company, operating in Eastern Arkansas and represented by Marsilliot & Chandler, attorneys, of Memphis.

By the ruling of the commission the allowances to the short lines out of the interstate shipments of lumber and forest products must not exceed \$2 a car for switching a distance of one mile or less, \$3 a car for switching from over one to three miles, 1 1-2 cents per 100 pounds for hauling from three to six miles, 2 cents per 100 for hauling from six to 10 miles, 2 1-2 cents per 100 for hauling from 10 to 20 miles, 3 cents per 100 for hauling between 20 and 30 miles, and 4 cents per 100 for hauling over 30 miles from the junction point.

Where the rates from points on the tap lines

are made by the addition of an arbitrary, the arbitrary accrues to the tap lines.

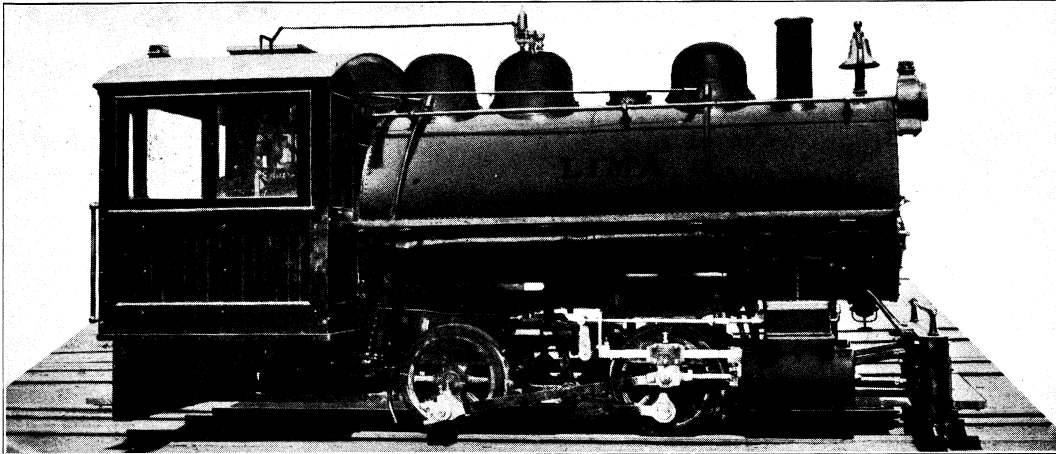
Reparation is provided for, but milling in transit rates on longs are not sanctioned. The practice of the trunk lines giving passes to the officials of the short lines is not disturbed when the short line officials devote substantially all their time to the service of the tap lines and where by the use of free passes no unlawful discriminations are effected.

Large reparation claims again the trunk lines will probably follow, and the development of territory heretofore not touched in Mississippi, Arkansas and Louisiana will result, because the pioneer short lines will be able to earn a livelihood from three to six miles, 2 cents per 100 for hauling by the division of the trunk line rates, thereby proving the commission's decision of far reaching importance in this section.

The ruling follows a recent decision of the United States supreme court fixing the status of the so-called tap line railroads.

For Immediate Shipment

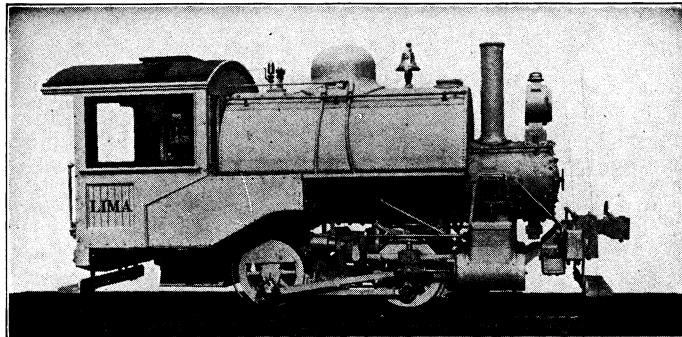
One 36" Gauge Dinkey Locomotive
See Cut Below. Size 10"x16"



Low Price Will Take This Locomotive

Are in a position to build three more on short notice on which will make bargain figure.

HURRY IF YOU WANT THEM



The above cut shows a 9"x14" Dinkey Locomotive, Standard Gauge which we have for immediate shipment. Special price as only one we have left.

WRITE OR WIRE US

LIMA LOCOMOTIVE CORPORATION
LIMA, OHIO

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Directory of Railway, Locomotive, Engineering and Mining,
and Lumber Journals.

ARE YOU INTERESTED IN LUMBER?

If so, the SOUTHERN LUMBERMAN will tell you each week just what the market conditions are, and better still, will point a finger to the dry stocks of any merchantable lumber that is manufactured in the South. It will tell you of wholesalers and lumber consuming factories in the North and East wanting lumber. It will keep you posted on developments before the Interstate Commerce Commission, and give you all the railroad news that affects lumbermen.

Subscription Price, \$4.00.

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Home Office, Nashville, Tenn.

Branch Offices: New York, Washington, Chicago, Cincinnati, Memphis and New Orleans.

"Livest, fastest growing lumber paper in the world."

Read It, because—

You get it *every week*.

It will keep you posted on markets and give you the news of the entire lumber world, *every week*.

It contains dependable and authoritative editorial comment and opinions on matters of interest to the trade, *every week*.

Its many departments and special articles provide a veritable compendium of instructive, informing and entertaining lumber miscellany, *every week*.



Advertise in It, because—

It reaches practically ALL the trade.

Its advertising pages are considered the leading directory or guide to "Where to Buy."

It will give you MORE circulation than any *two* other lumber papers.

It will give you BETTER circulation. The average credit rating of its subscribers exceeds \$100,000 each, thus assuring you inquiries from firms which will make the most desirable customers.

Railway Age Gazette

A Weekly, devoted to all branches of Railway activity. - - - - - Subscription, \$5.00.

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A Monthly, of great value to the mechanical Department. - - - - - Subscription, \$2.00.

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Leading Railway Publishers,
CHICAGO

NEW YORK

CLEVELAND

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Now in its Fifty-second Year

Published Weekly at
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The largest circulation of any Railroad Journal in the World among the men engaged in mechanical departments of railways.

Official Organ of the International Railway General Foreman's Association.

Has long been acknowledged the most interesting Technical paper published.

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Specimen copy on request. 114 Liberty St., New York

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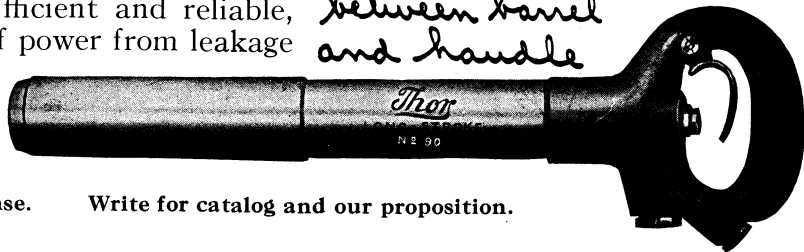
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Foreign, 75 cents a year.

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Thor One-Piece Pneumatic Long-Stroke Riveting Hammers

Are guaranteed to drive Rivets faster, leave a better finished job, and to cost at least 50 per cent less for repairs than any other make. They are the most efficient and reliable, as there is no loss of power from leakage of air or interruption in the work due to loose joints.

*No coupling
between barrel
and handle*



Sent on trial at our expense.

Write for catalog and our proposition.

Independent Pneumatic Tool Co.

— MANUFACTURERS OF —

Thor Piston Air Drills, Reversible Flue Rolling, Reaming, Tapping and Wood Boring Machines, Close Corner Drills, Grinders, Pneumatic Riveting, Chipping, Calking and Flue Beading Hammers, Stay-Bolt Drivers, Holders-on Hose and Hose Couplings.

Thor Building 170 Broadway 1208 Farmers Bank Bldg. 1629 Candler Bldg. 61 Fremont St.
CHICAGO NEW YORK PITTSBURG ATLANTA SAN FRANCISCO

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These Tests
were made with our regular stock of
**Seamless
Steel Boiler Tubes
Arch Tubes
Superheater Flues
and
Pipes**
and tell the story of strength, toughness, ductility and vast superiority of these tubes over other types.

Samples and test pieces
gladly furnished if required.

We solicit your valued inquiries.

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STEEL PRODUCTS CO.
PITTSBURGH, PA.**
BRANCH OFFICES
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Pittsburgh White Metal Co.

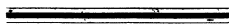
Manufacturers of

Babbitt and Anti-Friction METALS

**Monotype, Linotype, Stereotype, Electrottype, Lead
and Tin Pipe, Lead Traps and Bends, Solders
of any formula, Wire and Triangular
Solders, Art Glass Lead**

Or Anything in the Lead Line by Hydraulic Pressure.

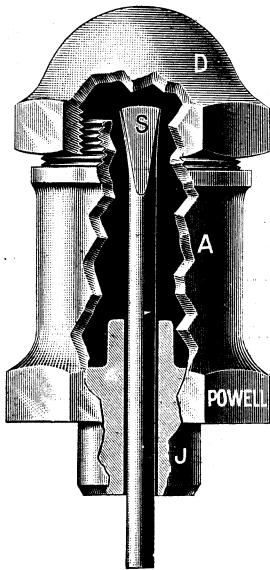
No Order too Small for Our Attention.



**OFFICE: 503 Diamond Bank Building
PITTSBURGH, PA.**

**WORKS: Pittsburgh New York
Best Metals Known**

FIG. 1022
With Loose Pin Feed



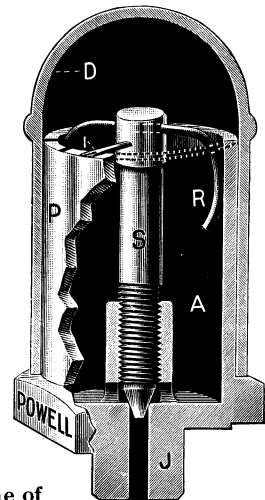
The Powell

Crank and Cross-Head Oilers

For Locomotive Use

Are excellent specimens of design, construction and workmanship. The bodies "A" and caps "D" are extra thick while the hexagon base and shank are made specially strong for the service intended.

FIG. 1023
With Spring Adjustment Feed and Indicator



We Manufacture a Complete Line of
Valves, Lubricators, Oilers, Cocks, Unions, Injectors,
Grease Cups and Brass Fittings

The Wm. Powell Company

Cincinnati, Ohio

QUALITY and SERVICE

Has Placed the

Russel Logging Cars

FOREMOST AMONG THE AMERICAN LOGGERS

Built for any capacity or to accommodate any length of log desired. Connected Truck Type for single or double length logs from 20,000 to 80,000 lbs. capacity. Pacific Coast type Detached Trucks from 80,000 to 100,000 lbs. capacity.

Skidding and Loading Machinery. Dump Cars.

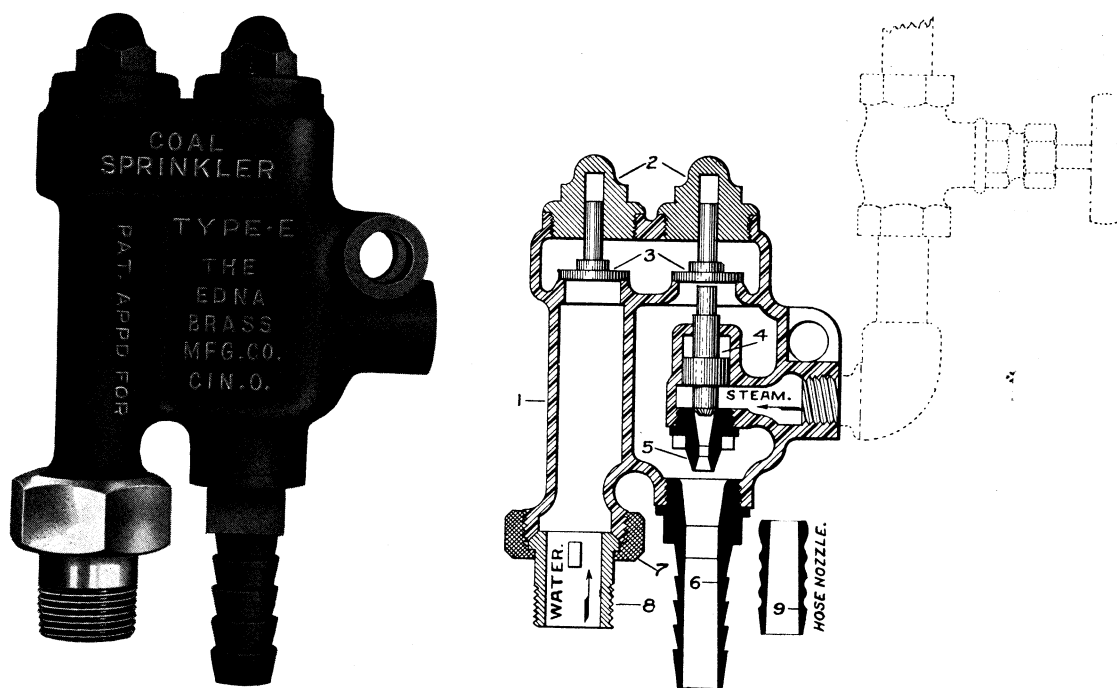
RUSSEL WHEEL & FOUNDRY CO.

Detroit, Michigan

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THE EDNA BRASS MFG. Co.

Cincinnati, Ohio



ACCIDENTS AVOIDED

By using the EDNA COAL SPRINKLER no more scalding of engineers and firemen from hot water on account of sprinkler hose blowing off of pipe.

This COAL SPRINKLER is sure in its action and faithful in delivery of a cool stream of water and ABSOLUTELY FREE of the danger of scalding the user.

Can be placed at any convenient point and will be sent on thirty days trial.

Write for catalog and particulars.

The Edna Brass Mfg. Co.

Cincinnati, Ohio

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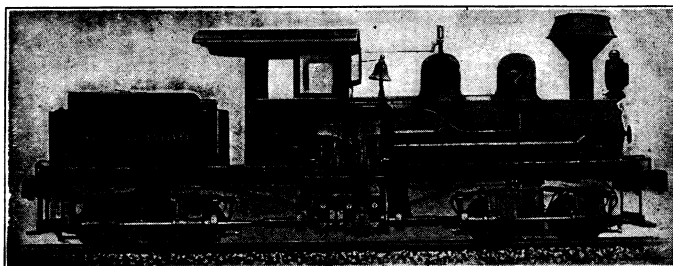
SECOND HAND LOCOMOTIVES

This
18 Ton
Second Hand
Shay
Locomotive

For Sale at a
Bargain

Write
or
Wire for
Full Particulars

Reference No. 137



This Locomotive is built for 56½" Gauge

PARTIAL LIST OF SECOND-HAND LOCOMOTIVES

	TONNAGE	TYPE	GAUGE	LOCATION	REFERENCE NO.
1	13	Shay	56½"	Georgia	0829
1	55	Shay	56½"	New Mexico	0832
1	65	Shay	36 "	New Mexico	083
1	65	Shay	56½"	New Mexico	0831
1	30	Mogul	56½"	Alabama	133
1	40	American	56½"	Alabama	134

Write for full information and price on the above Equipment

THE LIMA EQUIPMENT CO.

LIMA, OHIO

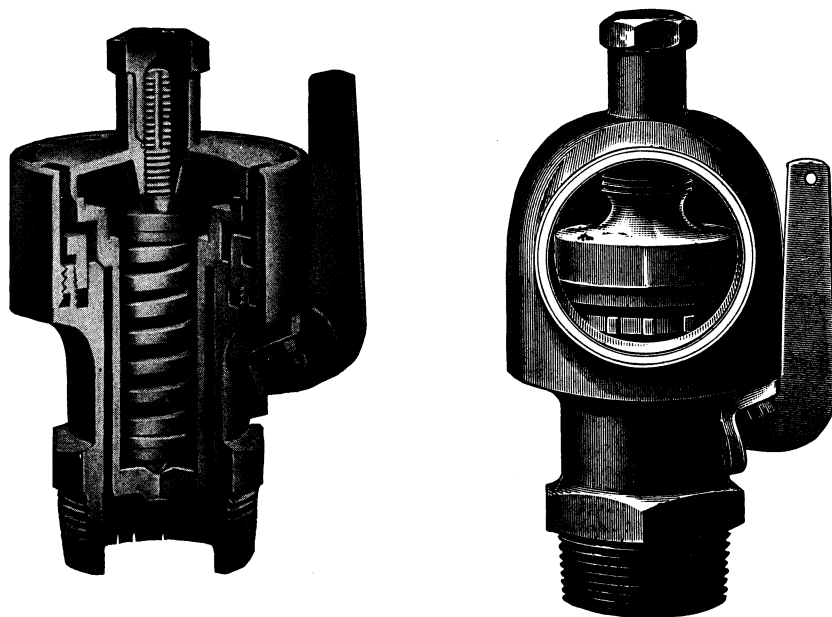
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FOR

**Portable, Stationary, Locomotive
and Marine Boilers**

OVER 1,000,000 IN ACTUAL USE.



Fort Wayne Safety Valve Works

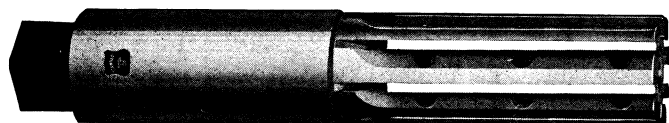
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817 Barr Street,

Ft. Wayne, Ind.

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THE STANDARD TOOL CO.'S "STANAR" Adjustable Reamers



Registered Trade Mark

← This Shield appears on all
OUR REAMERS →

THE bodies are made of tough machinery steel. They are furnished with either Carbon or High Speed Steel blades that are held in the slots by heavy screws.

They can be adjusted and reground, again and again. These blades will interchange in any slot of any body of same size and style. *This is a "STANAR" feature, exclusively. Their work will be smooth and accurate, and they will outwear a great many solid reamers.*

Write for No. 20 Catalogue

THE STANDARD TOOL CO.

General Offices and Factory: Cleveland, Ohio

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READE ST.

CHICAGO
552 W.
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Representatives in All Foreign Countries

The Standard Tool Co., 1914.

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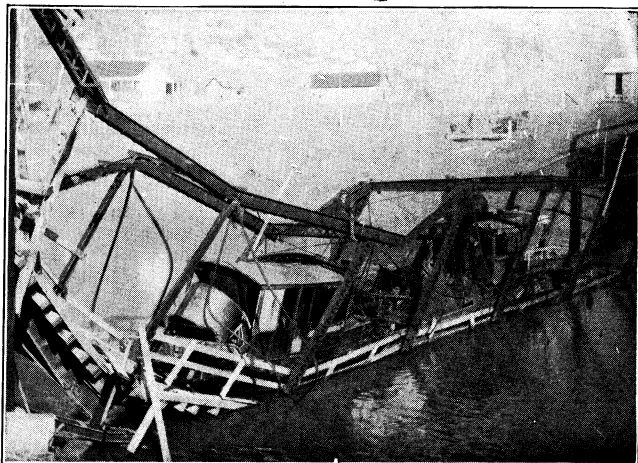
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*A Triumph of
Durability
"American" Log Loader
falls 75 feet—few rep-
airs required*



The durable construc-
tion of

"American" Log Loaders

makes them practically
accident proof. They
not only bear up well un-
der the hard knocks of
the average day's work,
but come through ser-
ious accidents with tri-

fling repair expense. One "American" Loader operator tells us
that he lost just 45 minutes last year on account of repairs.

An "American" Log Loader

will not only load logs faster and more economically, but build
all your logging road, making cuts and fills, driving piles and lay-
ing track. It will even set the heavy timbers and machinery of
your mill—and it will never break down and tie up your whole
operation. **YOU CAN BANK ON THAT!**

*American Hoist &
Derrick Co., St. Paul, Minn.*

HIGH SPEED CABLEWAYS IN MOUNTAIN LOGGING

HIGHEST SPEED WITHOUT DAMAGE TO TIMBER. SKIDDING LOGS FOR LESS THAN \$1.00 PER M. FOR LABOR

REACH OUT 2600 FT. AND SAVE RAILROADS

Read This Report

LOGS AT MILL AT LOWEST COST

THIS ENTIRE MOUNTAIN GORGE LOGGED PROFITABLY AND EXCLUSIVELY WITH LIDGERWOOD CABLEWAY SKIDDERS.

Span 4 1/2 to 2500 Feet

THE ROUGHEST LOGGING OPERATION EAST OF THE ROCKIES

DRAWN TO SCALE

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is the one practical way of cleaning rough country of timber—only small crews are required—no horses are used—low maintenance cost—fast operation and delivery of “Logs at mill at lowest price.”

REPORT FOR SIX DAYS

Work by Skidder No. 3

Operating in country illustrated above

1913	Number of logs	Feet	Labor cost per M.
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July 26	238	47.100	.75
July 28	293	48.900	.66
July 29	284	49.680	.65
July 30	269	45.100	.67
July 31	235	42.960	.76

Lidgerwood skidders are operating in every part of the country. Exclusive features embodied in these machines. Superior to all others. Mechanical slackpuller and interlocking drums. Have high speed and bring in a full load every trip.

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